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**Evaluation of biological remains from
excavations at Chowder Ness, Barton upon
Humber, North Lincolnshire
(site code : CNB2003)**

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Evaluation of biological remains from excavations at Chowder Ness, Barton upon Humber, North Lincolnshire (site code: CNB2003)

by

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Summary

Three processed sediment samples together with small 'vouchers' of unprocessed sediment, and a single bone, recovered from deposits encountered during excavations at Chowder Ness, Barton upon Humber, North Lincolnshire, were submitted to PRS for an evaluation of their bioarchaeological potential. Three broad chronological phases were identified for the site ranging from prehistoric to modern date.

One of the samples (Sample 6, Context 204) gave assemblages of plant and invertebrate remains. Most of the plant remains were of herbaceous detritus, with a rather small assemblage of fruits and seeds consistent with deposition in a tidal alluvial context. Ochthebius species, some other aquatics, and waterside species exploiting vegetation or mud, made up the greater part of the beetle and bug assemblage. Those invertebrate taxa that could be identified sufficiently closely did not indicate saline or brackish conditions, however. The other two sampled deposits gave only traces of biological remains (including a single cow metatarsal) of no interpretative value.

Radiometric dating of the peat fraction of the residue from Sample 6 (Context 204) returned a 2-sigma calibrated radiocarbon date of Cal BC 790 to 380.

Despite quite good preservation, further archaeobotanical analysis of the present material is unlikely to provide additional interpretatively valuable information. Invertebrates from deposits such as Context 204 are worth investigating where dating is good. However, the present assemblage is too small to justify further analysis unless there is reason to investigate the degree of salinity.

KEYWORDS: CHOWDER NESS; BARTON UPON HUMBER; NORTH LINCOLNSHIRE; EVALUATION; PREHISTORIC TO MODERN; RADIOCARBON DATE CAL BC 790 to 380; PLANT REMAINS; CHARRED PLANT REMAINS; INVERTEBRATE REMAINS; VERTEBRATE REMAINS

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Evaluation of biological remains from excavations at Chowder Ness, Barton upon Humber, North Lincolnshire (site code: CNB03)

Introduction

An archaeological evaluation excavation was carried out by Humber Field Archaeology (HFA) at Chowder Ness, Barton upon Humber, North Lincolnshire (NGR TA 0034 2277), between the 9th and the 20th of June 2003.

Four trial trenches were excavated. Trenches 1 and 2 were located to investigate geophysical anomalies detected during an earlier survey of the site. The previous work also identified the prehistoric shoreline and Trenches 2, 3 and 4 were located to encounter this.

Analysis of the stratigraphic sequence allowed three broad chronological phases to be assigned to the site as follows: Phase 1—glacial sands and alluvial silts; Phase 2—palaeochannels; Phase 3—flood deposits, topsoil and modern (20th century) ground raising.

Three processed sediment samples ('GBA'/'BS' *sensu* Dobney *et al.* 1992), together with small 'vouchers' of unprocessed sediment, and a single bone, were submitted to PRS for an evaluation of their bioarchaeological potential.

Methods

The sediment samples were described, sieved (to 1 mm, with 300 and 500 micron washover fractions) and dried by HFA. The dried washovers ('flots') and residues resulting from processing were submitted to PRS for examination.

The voucher from Context 204 (Sample 6) showed this deposit to have considerable potential for the preservation of invertebrate

remains. Its lithology was recorded using a standard *pro forma* and a subsample taken for processing, following the procedures of Kenward *et al.* (1980; 1986), for the recovery of plant and invertebrate macrofossils. The paraffin flot resulting from processing was examined for plant and invertebrate macrofossils. The residue was examined for larger plant macrofossils and other biological and artefactual remains. Insect preservation was recorded using the scheme of Kenward and Large (1998).

A small quantity (86 g dry weight) of the plant remains from the residue (of the HFA processed subsample) of Context 204 was submitted to Beta Analytic Inc. for radiocarbon dating of the deposit.

The single bone was examined against the PRS modern comparative reference collection and identified.

Results

Archaeological information, provided by the excavator, is given in square brackets. A brief summary of the processing method and an estimate of the remaining volume of unprocessed sediment follows (in round brackets) after the sample number.

Context 106 [fill of ?palaeo-channel]

Sample 8 (7 kg sieved to 1 mm, with 500 and 300 micron washover fractions; 1 kg of unprocessed sediment remains)

Excavator's description: Soft to firm, dark grey, fine silty clay, with a single fragment of animal bone.

The tiny washover fractions (totalling only 1 or 2 ml) were mostly modern rootlets, with a few sand grains and traces of other plant remains (including an occasional uncharred seed/fruit) and insect cuticle.

There was a tiny residue (dry weight 8 g) of small lumps of undisaggregated sediment (to 7 mm), small stones (to 15 mm), a few sand grains, and a trace of uncharred ?modern plant and invertebrate remains (including some earthworm egg capsules).

The large bone fragment recovered from this deposit was confirmed as being a deliberately chopped cow metatarsal with abraded surfaces (as provisionally identified by the excavator).

Context 204 [0.2 m thick organic silt layer sealed below alluvial layer 203]

Sample 6 (7 kg sieved to 1 mm, with 500 and 300 micron washover fractions; 1 kg of unprocessed sediment retained as voucher but 0.6 kg of this subsequently processed by paraffin flotation – see below)

Excavator's description: Soft, wet, dark brown silt, with high organic content including twigs, ?reed, leaves.

The washover fractions were large (total volume approximately 140 ml) and largely composed of herbaceous detritus.

The residue was rather small (dry weight 280 g) and, again, mostly of herbaceous detritus, with a few pieces of wood/woody root (to 150 mm).

Both the washover fractions and the residue had been dried. Because of this, the plant remains were recorded in more detail from a separate subsample (see below) taken from the voucher and processed to recover both plant and invertebrate remains.

After pre-treatment of the material sent for dating, two dateable fractions were available. These were some small pieces of wood, and a larger fraction mostly of fibrous peat. Small rootlets were visible throughout the latter fraction of the sample—these formed only a small amount of the total carbon but if they were of younger intrusive rootlets they could have some small bearing on the obtained age. It was decided to date the larger (peat) fraction using the radiometric technique. The 2-sigma calibrated radiocarbon date obtained was Cal BC 790 to 380 (Beta-181540).

Sample 6/T (0.6 kg from the 1 kg voucher sieved to 300 microns with paraffin flotation; approximately one third of a litre of unprocessed sediment remains)

Laboratory description: Moist, mid brown to mid grey-brown (orange in places from rotting organic material),

crumbly and sticky (working soft), clay silt (to silty clay), with some fine herbaceous detritus.

There was a large residue of about 500 ml of fine organic debris, with only the merest trace of sand. Most of the remains were herbaceous detritus, perhaps largely monocotyledonous (though not apparently from reed, *Phragmites*). There were some slightly mineralised clasts of silt with an iron oxide varnish inside ?root moulds. The rather small assemblage of fruits and seeds were largely taxa of brackish to saline habitats (including, for example, the salt-marsh taxa sea arrow grass, *Triglochin maritima* L., annual seablite, *Suaeda maritima* (L.) Dumort. and mud rush, *Juncus gerardi* Loisel.), consistent with deposition in a tidal alluvial context. Preservation was quite variable but basically fair to good; some fossils showed a silty coating.

The flot consisted of abundant rootlets, some other plant debris, and rather large numbers of invertebrates. Preservation was often quite good (E 2.0-3.5, mode 2.5 weak; F 2.0-3.0, mode 2.5 weak). Apart from fragments of immatures, perhaps mostly flies, most insects were present in small numbers, the exception being *Ochthebius* species. These, some other aquatics, and waterside species exploiting vegetation or mud, made up the greater part of the beetle and bug assemblage. *Plateumaris* species (lacking diagnostic parts) indicated emergent vegetation. There were only traces of taxa unlikely to have lived close to water but none, of those remains which could be identified closely (within the limits of an evaluation), indicated saline or brackish conditions.

Context 406 [primary fill of alluvial clay in natural channel]

Sample 2 (9 kg sieved to 1 mm, with 500 and 300 micron washover fractions; 1 kg of unprocessed sediment remains)

Excavator's description: Firm, light brown, fine silty clay, with few inclusions.

The washover fractions were tiny (total volume approximately 5 ml) and comprised modern rootlets and ?'straw'/'reed' fragments.

The tiny residue (dry weight 50 g) was of undisaggregated sediment (to 10 mm) and stones (to 20 mm).

Discussion and statement of potential

Despite the quite good preservation seen in Sample 6 (Context 204), further

archaeobotanical analysis of the present material is unlikely to provide additional interpretatively valuable information.

Invertebrates from deposits such as Context 204 are worth investigating where dating is good, and especially where a time-sequence can be examined. However, the present assemblage is too small to justify further analysis unless there is reason to investigate the degree of salinity further, as might be revealed by critical identification of some species (water beetles, ground beetles and the *Plateumaris* sp.).

Recommendations

No further work is necessary unless the question of salinity (see above) is of sufficient interest to require the additional study of some specific insect remains.

Retention and disposal

The sample from Context 204, and the fossils extracted from it, should be retained. The other remains considered here may be discarded unless required for some other aspect of study.

Archive

All material is currently stored by Palaeoecology Research Services (Unit 8, Dabble Duck Industrial Estate, Shildon, County Durham), along with paper and electronic records pertaining to the work described here.

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